

Z/508/60/000/000/013/018  
E073/E120

AUTHORS: Kuhn A., and Bárta Čestmír

TITLE: Influence of impurities on the decay of luminescence in  $\text{CaWO}_4$  single crystals

SOURCE: III. Konference o monokrystalech. Prague, Výzkumný ústav pro minerály, 1960. 177-180

TEXT: The authors investigated the influence of  $\text{Ga}^{3+}$ ,  $\text{Sc}^{3+}$ ,  $\text{La}^{3+}$ ,  $\text{Zr}^{4+}$ ,  $\text{Ni}^{2+}$ ,  $\text{Cd}^{2+}$ ,  $\text{NO}_2$ , on the decay of  $\text{CaWO}_4$  single crystals placed directly onto the front window of a photomultiplier. The luminescence was excited by a  $\text{Co}^{60}$  source with an activity of 7 mc, placed at distances of 5 cm to 1 m so that the frequency of the pulses permitted visual investigation of their shape. The pulses were observed by means of a synchroscope, described elsewhere. The rise time of the pulse was shortest for crystals activated with 1% gallium oxide. In pure  $\text{CaWO}_3$  and in single crystals with an excess of  $\text{WO}_3$  the duration of the rise time was about equal. The rise time was twice as long in specimens containing 0.64% thorium oxide, 1% scandium oxide, 0.04 and 0.4% nickel oxide, 5.4% cadmium oxide, 1% lanthanum oxide, 1% uranium oxide and 10% cadmium  
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Influence of impurities on the ...

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tungstate. The shortest peak duration and decay time was observed for specimens with 1%  $\text{Ca}_2\text{O}_3$ ; the longest was observed for crystals with 1%  $\text{UO}_2$ . Here, the concentration of the activator is referred to the composition of the initial raw material for the synthesis of the single crystals by the Verneuil method. The authors also compared the shape of the pulses of  $\text{NaI:Tl}$  and  $\text{CaWO}_4$ . Thallium-activated sodium has a pulse rise time of  $0.5 \mu\text{s}$  and decay time of  $2.5 \mu\text{s}$ ; the pulses for  $\text{CaWO}_4$  were considerably shorter, i.e. a rise time of  $0.2 \mu\text{s}$ . It follows clearly from the shape of the decay curve that there are two types of luminescence: one with a very short decay time, below  $0.3 \mu\text{s}$ , and one with a decay time of about  $1 \mu\text{s}$ . In specimens with additions of 5%  $\text{UO}_2$  in the initial charge, an increase in the long-duration component of the decay time to  $1.5 \mu\text{s}$  was observed. On the other hand, cadmium oxide and an excess of  $\text{WO}_3$  had no appreciable influence on the time characteristics or on the shape of the pulse. The work will be continued with larger single crystals.

There are 4 figures.

Card 2/3

Influence of impurities on the ...

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ASSOCIATION: Energetický ústav  
(Power-engineering Institute) (A. Kuhn);  
Výzkumný ústav pro minerály, Turnov  
(Research Institute for Minerals, Turnov)  
(Č. Bárta)

Card 3/3

ESPE, Werner: KUHN, Arno

Some technological problems of Geiger-Muller tubes and spark counters.  
Slaboproudý obzor 21 no.5:288-299 My '60. (EEAI 9:8)

1. Slovenska vysoka skola technicka, Bratislava (for Espe); 2.
- Spolek pro chemickou a hutni vyrobu, Usti nad Labem (for Kuhn)  
(Geiger-Muller counters)

KYUN B. [Kuhn, B.]; SHLENK, B. [Schlenk, B.]

Studies on the angular distribution of the He 3 T  
reaction. ATOMKI kozl 5 no. 3/4 1-8 D '63.

DEPOWSKI, Stanislaw; KROLICKA, Jadwiga; KUHN, Danuta

Prospects for natural gas discoveries in the Triassic deposits of the fore-Sudetic monocline in the light of the Sulechow IG-1 structural boring. Przegl geol 10 no.6:275-279 Je '62.

1. Instytut Geologiczny, Warszawa.

KUHN, Eduard, MUDr.

Dispensary services in gastric and duodenal ulcer. Cesk. zdravot.  
4 no.5:261-267 May 56.

1. Ustav pro vyzkum vyzivy lidu v Praze.  
(PEPTIC ULCER, therapy,  
dispensary serv. (Cz))

Bedrich MOSINGER; EDUARD KUHN

Alimentary Lipaemia and Resistance to Altitude Anoxia:

Institute of Human Nutrition, Budejovicka 800, Praha XIV, Czechoslovakia. July 1.

Nature, Vol. 180, No. 4595, pp 1140-41, 23 November 1957

KUHN, E.; PAV, J.; PLACER, Z.

Certain metabolic effects of intravenous heparin. Cesk. fysiolo.  
8 no.3:218 Apr 59.

1. Ustav pro vyskum vyziivy lidu, Praha. Predneseno na III. Fysiologickych  
dnech v Brne dne 15. 1. 1959.

(HEPARIN, eff.

on metab. intravenous admin. (Cz))

(METABOLISM, TISSUE, eff. of drugs on,  
heparin, intravenous admin. (Cz))

KUHN, Eduard

Contribution to the study of the effect of therapeutic sleep on tissue metabolism. I. Effect of therapeutic sleep of various types on food intake. Cas. lek. cesk. 98 no. 34:1053-1059 21 Aug 59.

1. Ustav pro vyzkum vyziwy lidu, Praha-Krc. red. doc. MUDr. J. Masek.  
(SLEEP, effects)  
(APPETITE, physiol.)

PAV, J.; PLACER, Z.; KUHN, E.; ROUBAL, Z.

Post-heparin activity of esterases in human serum. II. Inhibition of esterolysis and fading of esterase activity. Cas. lek. cesk. 98 no.39:1232-1236 25 8 '59.

1. Ustav pro výživu lidu, Praha, reditel doc. dr. J. Masek.  
Vyzkumny ustav pro farmacii a biochemii v Praze, reditel ing.  
dr. O. Nemeck.

(ESTERASES blood)

PAV, J.; WENKEOVA, J.; KUHN, E.

On the cause of post-heparin esterases in rats. Cesk. fysiол.  
9 no.1:41-42 Ja 60.

1. Ustav pro vyzkum vyziivy lidu. Praha.  
(LIPOPROTEIN LIPASE)

BULFASOVA, H.; GROF, St.; HORACKOVA, E.; KUHN, E.; RYSINEK, K.; VITEK, V.  
VOJTECHOVSKY, M.

Psychopathology and biochemistry of experimental psychoses produced  
by anticholinergic hallucinogens. Cesk.psychiat. 56 no.1:14-23 F '60.  
(HALLUCINOGENS toxicol.)  
(PSYCHOSES TOXIC exper.)

BULTASOVA, H.; GROF, S.; HORACKOVA, E.; KUHN, E.; RYSANEK, K.; VITEK, V.;  
VOJTECHOVSKY, M.

Psychopathology and biochemistry of experimental psychoses  
induced by anticholinergic hallucinogens. Ideg.szemle 13 no.8:  
225-234 Ag '60.

1. Institut fur experimentelle Therapie in Prag 14. (Vorstand  
Doz. MUDr. O. Smahel) Institut fur Ernahrungsforschung in Prag 14  
(Vorstand Doz. MUDr. J. Masek) Psychiatrische Heilanstalt in  
Kosmonosy (Direktor MUDr. V. Danov)  
(HALLUCINOGENS pharmacol)  
(PSYCHOSES exper)

KUHN, E.

Effect of medication sleep on oxygen metabolism. *Activ. nerv. sup.* 3  
no.2:202-203 '61.

1. Ustav pro ~~vyskum~~ ~~vyzivy~~ ~~lidu~~, Praha.

(SLEEP) (OXYGEN metab)

KUHN, E.; VITEK, V.; VOJTECHOVSKY, M.

Energy and lipid, steroid and serotonin metabolism after various hallucinogens. *Activ. nerv. sup.* 3 no.2:212-213 '61.

1. Ustav pro vyzkum vyzivy lidu a Vyzkumny ustav experimentalni terapie, Praha.

(HALLUCINOGENS pharmacol) (LIPIDS metab)  
(SEROTONIN metab) (STEROIDS metab)

7

Country: Czechoslovakia

Academic Degrees: Dr

Affiliation: Nutrition Research Institute (Ustav pro vyzkum vyživky lids), Prague-Kbc.  
Director: docent J. MASEK, MD.

Source: Prague, Vnitřní Lékarství, No 4, Apr 61, pp 413-422

Text: "Turbidity Curves in Neuroses and Peptic Ulcer Cases."

Co-authors:

PITK, F. Nutrition Research Institute, Prague.

VOJTECHOVSKY, M. " " " "

VAJNICKOVA, H. " " " "

PLOCHAR, J. " " " "

PAV, J.; WENKEOVA, J.; KUHN, E.

The problem of lipoprotein lipase and postheparin serum esterase.  
Cas.lek.cesk 100 no.9:273-275 3 Mr '61.

1. Ustav pro vyzkum vyziwy lidu Praha, red. doc. MUDr. J. Masek.

(LIPOPROTEIN LIPASE) (HEPARIN pharmacol)  
(ESTERASES blood)

KUHN, E.; VOJTECHOVSKY, M.; HORACKOVA, E.; KRAUSOVA, J.; VAVRINKOVA, H.

Reflection of emotions in fat metabolism. *Activ. nerv. sup.* 4 no.2:  
175-176 '62.

1. Ustav pro vyzkum vyziwy lidu, Praha.

(FATS metab) (EMOTIONS)

KUHN, E.; VOJTECHOVSKY, M.; HORACKOVA, E.

Effect of sleep therapy on body weight changes. *Activ. nerv. sup.* 4  
no.2:176-177 '62.

1. Ustav pro vyzkum vyzivy lidu, Praha.

(SLEEP ther) (BODY WEIGHT)

RYSANEK, K.; VITEK, V.; VOJTECHOVSKY, M.; KUHN, E.

Biochemical studies on pharmacodynamics of new Czechoslovakian synthetic compounds releasing serotonin. *Activ. nerv. sup.* 4 no.2: 203-204 '62.

1. Interni katedra UDL, Vyzkumny ustav experimentalni terapie a Ustav pro vyzkum vyziwy lidu, Praha-Krc.

(SEROTONIN physiolo)

PECHAR, J.; KUHN, E.; MOSINGER, B.; SEGOVA, E.; VAVRINKOVA, H.; HROMADKOVA, V.;  
PETRASEK, R.

Effect of fat intake on tissue oxygen supply. Cesk. gastroent. vyz.  
16 no.3/4:197-205 Ap '62.

1. Ustav pro vyzkum vyzivy lidu v Praze, reditel doc. MUDr. J. Masek,  
DrSc.

(FATS) (NUTRITION) (TISSUE METABOLISM) (HEMOGLOBIN)

KUHN, E.; VOJTECHOVSKY, M.; HORACKOVA, E.; VAVRINKOVA, H.

Contribution to the neural regulation of fat metabolism in man. Cesk. gastroent. vyz. 17 no.3/4:214-222 Ap '62.

1. Ustav pro vyzkum lidu v Praze, reditel doc. MUDr. J. Masek, DrSc.  
(NUTRITION) (SLEEP) (BARBITURATES) (CHLORPROMAZINE)  
(REFLEX CONDITIONED) (MENTAL DISORDERS) (LIPID METABOLISM)

VOJTECHOVSKY, M.; HORACKOVA, E.; KUHN, E.; se statistickou spolupraci inz.  
ZVOLANKOVE, K.

Neuroticism in peptic ulcer. Cas. Lek. Cesk. 101 no.5:142-149 2 F '62.

1. Ustav pro vyzkum vyzivy lidu, Praha, reditel doc. Dr. MUDr.  
J. Masek.

(PEPTIC ULCER psychol) (NEUROSES)

CZECHOSLOVAKIA

E. KUHN, Institute for Research in Human Nutrition (Ustav pro vyzkum  
vyzivy lidu) Chief (reditel) Prof Dr J. MASEK, DrSc; Prague.

"Regulation of Fluid Intake."

Prague, Casopis Lekarů Českyh, Vol 102, No 20, 17 May 63; pp 99-104 of  
separately paginated section "Medical Sciences Abroad" (Lekarska veda v  
zahranici).

Abstract : Discussion of mechanisms regulating fluid balance: peripheral,  
osmotic-volume and central 'theories'. Latter is discussed on cortical,  
hypothalamic, other neurogenic and neurohumoral levels. The roles of  
caloric intake, thermoregulation and biologic rhythms are reviewed.  
Over 140 references are listed by number in text but article has been  
cut and no bibliography appears.

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CZECHOSLOVAKIA

M. VOJTECHOVSKY, E. KUHN and E. HORACKOVA, Institute for Research in Human Nutrition (Ustav pro vyzkum vyzivy lidu,) Prague.

"Central Effects of Serotonin Antagonists Lysenyl and Deseril in Clinical Experiments."

Prague, Activitas Nervosa Superior, Vol 5, No 2, May 63; pp 211-213.

Abstract : Comparison of Lysenyl, Deseril and placebo - Lysenyl is weaker but both smoothen out high-voltage EEG waves following hyperventilation in migrainous patients; emetic, anorectic and thymodysleptic effects are about the same. Mesenyl, a newer Czech analog may be less toxic, hence better clinically. EEG, 1 Western and 1 Czech reference.

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KUHN, E.

Management of the use of fluids. Cas. lek. cesk. 102 no.20:Lek.  
ved. zahr. 5:99-104 contd 17 My '63.

1. Ustav pro vyzkum vyzivy lidu v Praze, reditel prof. dr.  
J. Masek, DrSc.

(WATER-ELECTROLYTE BALANCE)  
(CENTRAL NERVOUS SYSTEM)  
(HYPOTHALAMUS) (CEREBRAL CORTEX)  
(BODY TEMPERATURE REGULATION)

KUHN, E.

Management of the use of fluids. Cas. lek. cesk. 102 no.25:  
Lek. ved. zahr. 6:117-120 21 Je '63.

1. Ustav pro vyzkum vyzivy lidu v Praze, reditel prof. dr.  
J. Masek, DrSc.

(WATER-ELECTROLYTE BALANCE)

KUHN, E., Nutrition Research Institute (Ustav pro vyzkum vyzivy lidu), Prof. J. MASEK, MD, Dr of Sciences, director.

"Nervous Control of Fat Metabolism"

Prague, Casopis Lekaru Ceskych, Vol CII, No 37, 13 September 63, pp 1001-1007.

Abstract [Author's English summary, modified]: A detailed review of literature on the nervous control of lipide metabolism. The review proves a considerable progress in this field in recent years because of new biochemical, neurophysiological, pharmacological, experimental psychological, and other methods. Evaluated is the participation of different levels of the nervous system and the role of neurohumoral mediators. The pathophysiological aspect of the problem is emphasized as important for the pathogenesis, treatment, and prevention of some "diseases of civilization." Hundred-and-seventy-eight references, including 12 Czech, 36 Russian, and 1 Yugoslav.

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KUHN, E.

Contribution to the study of the effect of therapeutic sleep on metabolism. III. Effect of therapeutic sleep on protein metabolism: b) changes in nitrogen fractions in the blood and urine. Cas.lek. cesk. 103 no.3:67-77 17 Ja'64.

1. Ustav pro vyzkum vyzivy lidu, Praha-Krc; reditel: prof. dr. J.Masek, DrSc.

\*

KUHN, E.

Contribution to the study of the effect of therapeutic sleep on metabolism. 4. Effect of therapeutic sleep on protein metabolism: c) changes in nitrogen utilization. Cas.lek.cesk. 103 no.5:123-129 31 Ja'64.

1. Ustav pro vyzkum vyzivy lidu, Praha-Kro, (reditel: prof. dr. J.Masek, DrSc.)

\*

KUHN, E.

Contribution to the study of the effect of medicinal sleep on metabolism. 2. Effect of medicinal sleep on protein metabolism. Changes in nitrogen balance. Cas. lek. cesk. 102 no.42:1154-1162 18 0 '63.

1. Ustav pro vyzkum vyzivy lidu, Praha-Krc, reditel prof. dr. J. Masek, DrSc.

\*

KUHN, E.

Contribution to the study of the effect of medicinal sleep on metabolism. 2. Effect of medicinal sleep on protein metabolism. Changes in nitrogen balance. Cas. lek. cesk. 102 no.42:1154-1162 18 0 '63.

1. Ústav pro výzkum výživy lidu, Praha-Kře, reditel prof. dr. J. Masek, DrSc.

\*

BRODAN, V.; MAREK, I.; KUHN, E.

A mathematical evaluation of oxygen consumption during physical exercise and recovery. *Physiol. Bohemoslov.* 14 no.2:201-205 '65.

1. Institute for Human Nutrition and Institute of Mathematics, Charles University, Prague.

Physiology

CZECHOSLOVAKIA

KUHN, E.; STRIBRNA, J.; BRODAN, V.; SCHUCK, O.; Institute for Human Nutrition (Ustav pro Vyzkum Vyzivy Lidu) Prague, Director (Reditel) Prof Dr J. MASEK; Research Institute of Experimental Therapy (Vyzkumny Ustav Experimentalni Terapie), Prague, Director (Reditel) Prof Dr O. SMAHEL.

"Renal Response to a Water Load in Subjects on a Low Sodium Diet."

Prague, Casopis Lekarů Ceských, Vol 105, No 44, 4 Nov 66, p 1209

Abstract: In people with Na depletion water load is eliminated at a slower rate than in normal people. Experiments on 8 men aged 21 to 46 years showed that the maximum minute diuresis is lowered when Na is lowered; the total amount of excreted water also decreases; the concentration index of endogenous creatinine is higher at reduced Na; osmolar clearance of Na and Cl<sup>-</sup> is reduced; no change in the elimination of NH<sub>4</sub><sup>+</sup> and K was observed, acid content increased; excretion of water is lowered when excretion of solutes is lowered; Na resorption takes place at an increased ratio of Cl<sup>-</sup> to Na. 1 Table, 2 Western references.

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L-29466-66

ACC NR: AP6019985

SOURCE CODE: CZ/0079/65/007/003/0270/0271

AUTHOR: Brodan, V.; Kuhn, E.

ORG: Institute of Human Nutrition, Prague

TITLE: Effect of cycloserine isomers on physical fitness in man <sup>22</sup> [This paper was presented at the 7th Annual Psychopharmacological Meeting, Jeserik, 20-23 January 1965]

SOURCE: Activitas nervosa superior, v. 7, no. 3, 1965, 270-271

TOPIC TAGS: biochemistry, pharmacology, man, biologic metabolism, human physiology

ABSTRACT: Cycloserine (CS) isomers affect physical performance in different ways. d-CS has an excitory effect similar to some narcotic drugs. l and dl increase absolutely and relatively the anaerobic component of energy turnover. The l isomer also increases the level of pyruvic acid. No pharmacodynamic effect on circulation and respiration was found. The CS isomers act mainly on the metabolism. Orig. art. has: 1 table. [Orig. art. in Eng.]

[JPRS]

SUB CODE: 06/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 005

Card 1/1 fv

RYŠANEK, K.; VITEK, V.; VOJTECHOVSKY, M.; KUHN, E.

Effect of fenoharman on the excretion of 5-hydroxyindolacetic  
and 3-methoxy-4-hydroxymandelic acid in man. Cas. lek. cesk.  
102 no.40:1099-1102 4 0 '63.

1. Interni katedra Ustavu pro doskolovani lekaru, Vyzkumny  
ustav experimentalni terapie v Praze, reditel doc. dr. O. Smahel,  
DrSc. Ustav pro vyzkum vyzivy lidu v Praze, reditel prof. dr.  
J. Masek, DrSc.

(MANDELIC ACID) (INDOLACETIC ACID)  
(ARGENTAFFINOMA) (SEROTONIN) (INDOLES)

*Handwritten:*  
VOLNI, G.; KUHN, E.

Radiological diagnosis of tracheal diverticulum. *Magy. radiol.* 5 no.4:  
154-157 Nov 1953. (CIML 25:5)

1. Doctors. 2. Roentgen Department (Head Physician -- Dr. Erno Koppenstein, Candidate Medical Sciences), Uzsoki-utcai Metropolitan Hospital (Director -- Dr. Karoly Farkas, Candidate Medical Sciences).

KUHN, Endre, Dr.

Plasmocytoma destroying the mandible and parotid gland. Orv. hetil.  
99 no. 49:1724-1726 7 Dec 58.

1. A Fovarosí Uzsóki utcai Korház (igazgató-foorvos: Szántó-Sándor dr.)  
Onkológiai-Radiológiai Intézetének (osztályvezető-foorvos: Schaffer  
Mihály dr.) közleménye.

(MYELOMA, PLASMA CELL, case reports

mandible, with extensive destruction of bone & infiltration  
of parotid gland (Hun))

(MANDIBLE, neoplasms

myeloma, plasma cell, with extensive destruction of bone &  
infiltration of parotid gland (Hun))

(PAROTID GLAND, neoplasms

myeloma, plasma cell, metastatic from mandible, case  
report (Hun))

EXCERPTA MEDICA Sec 14 Vol 13/11 Radiology Nov 59

2280. RADIOTHERAPY OF DUPUYTREN CONTRACTURE - A Dupuytren contractura sugaras kezelése - Kuhn E. and Schäffer M. Fővárosi Uzsoki Utcai Kórház Onkol.-Radiol. Intéze, Budapest - MAG. ONKOL. 1959, 3/1 (17-19) Tables 1

In all 75 cases a special radium mould was used, with 50 mg. of radium, filtered by 0.5 mm. of Pt, and a focus-skin distance 1 cm., giving a total dose of 1,800-2,400  $\gamma$ -r. in 2-3 sessions. It was found that radiotherapy is successful in the early stages of the disease. Radiotherapy of long-standing contractures is of no effect, and in these cases surgery is the method of choice. Postoperative irradiation may be of value in the prevention of recurrences. (XIV, 9, 19\*)

KUHN, Endre, dr.

Primary multiple malignant tumors of the oral cavity and upper respiratory passages. Fulorrggegyogyaszat 7 no.4:153-158 D '61.

1. A Fovarosi Uzsoki u. Korhaz (Budapest) Onko-radiologiai Intezetnek (Foorvos: Vador Ferenc dr.) kozlemenye.

(MOUTH neopl) (RESPIRATORY SYSTEM neopl)

KUHN, Endre, dr.; KELLER, Gabor, dr.

Some problems concerning radiation protection during gynecological brachy-curie therapy. Orv. hetil. 105 no.51:2427-2429 20 D '64.

1. Pecsí Orvostudományi Fgyetem, Szülészeti és Nőgyógyászati Klinika, Radiológiai Osztály.

CZECHOSLOVAKIA UDC 616-001.9:(616.153.472.3:616.153.484.2

BRODAN, V.; KUHM, E.; Research Institute of Human Nutrition (Ustav pro Vyzkum Vyzivy Lidu), Director (Reditel) Prof Dr J. MASEK.

"Changes of Lactic and Pyruvic Acid During Physical Exertion I."

Prague, Casopis Lekarů Ceskych, Vol 105, No 46, 18 Nov 66, pp 1261 - 1265

Abstract [Authors' English summary modified]: In a group of 10 men and 10 women the influence of increasing physical loading on the ratio of lactic to pyruvic acid was investigated. A suggestion is made to use these ratios for the evaluation of physical fitness and for the determination of conditions of maximum efficiency of work. 3 Figures, 3 Tables, 14 Western, 5 Czech, 1 Japanese reference.

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HUNGARY

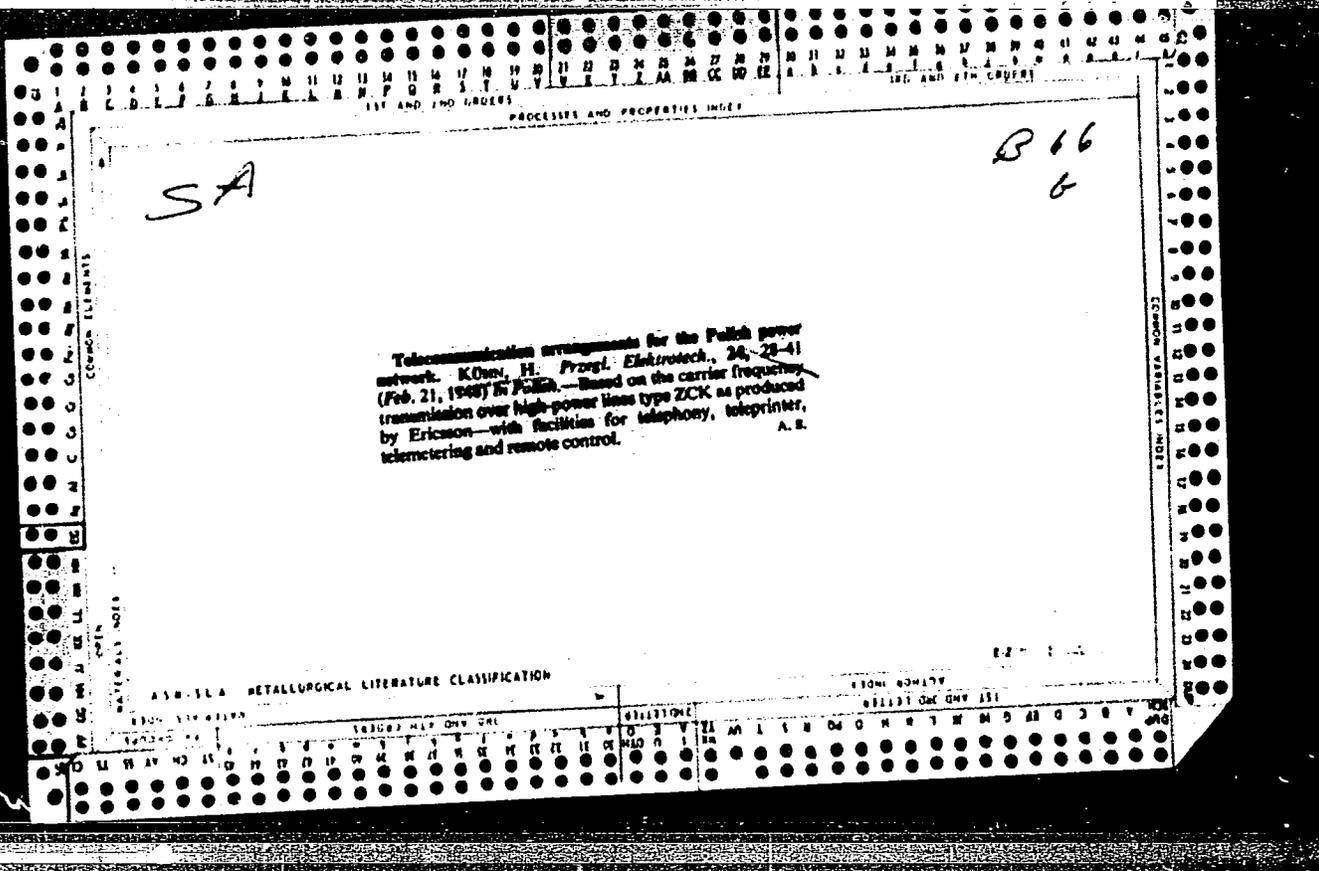
KUHN, Dr Endre, and KELLER, Dr Gabor, X-Ray Clinic (Rontgenklinika), Pecs.

"Metastases of Pharyngolaryngeal Tumors and Tumors of the Accessory Cavity; Problems in Their Radiation Treatment"

Budapest, Magyar Onkologia, Vol 10, No 4, Dec 1966; p. 205.

Abstract: 106 patients treated at the X-Ray Clinic, Pecs, for pharyngolaryngeal tumors and tumors of the accessory cavity during 1962-1964 were examined for metastases. The frequency of metastasis to the neck is determined by the location of the primary tumor as well as the latter's size and histological structure. In four patients, bilateral metastases were observed consisting of nasopharyngeal or supraglottic tumors; distant metastases were noted in four other patients, all of whom suffered from lymphoreticular tumor sensitive to radiation. The metastases of lymphoreticular tumors are inoperable. The results of X-ray irradiation were relatively favorable. No references.

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Polish Tech. Abstracts  
No. 1, 1953  
Mechanics, electrotechnics  
and power

1819

621.396.44:621.315.052.7

1/2

Kühn H., The Problem of Planned Development of a High-Frequency  
Telecommunication Network in High Tension Lines.

"Zagadnienie planowego rozwoju sieci telekomunikacyjnej  
wielkiej czestotliwosci na liniach wysokiego napiecia". (Prace  
Przem. Inst. Telekom. No. 6), Warszawa, 1951, PWT, 11.5 pp.,  
6 figs., 5 tabs.

The author deals with the fundamental problems concerning  
the design and development of high frequency telecommunication  
networks in high tension lines, namely: 1) frequency range  
allotted, 2) general plan of frequency allocation, 3) directives  
for the application of telecommunication systems within, and  
on the boundaries of, national network system, 4) directives  
for the application of frequency changer and similar systems,  
to be transmitted over high

(over)

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tension lines, 6) recommendations as to the use of choke coils and, 7) recommendations concerning coupling method between high frequency equipment and high tension lines. Various factors taken into consideration when preparing the recommendations referred to above. The most important factors allowed for are: attenuation in transmission lines and line equipment, linear distortion, blocking properties of H.F. chokes, radiation of H.F. energy by high tension lines, susceptibility to noise and atmosphere conditions, radiotelephony frequency range, location of radio-transmitters, high frequency radio-transmitter and receiver design, single band and bi-band systems, modifications to existing equipment, influence of defects in high tension lines on communication channels, cost estimates. The author analyses the influence of all these factors and provides a number of computations necessary for the implementation of the directives referred to.

*[Handwritten initials]*

S. H.  
Sub. D

Measurements

621.317.083.7 : 621.315.052.63  
3340. Telemetering over high-voltage lines. II.  
Kluzm. Przegl. Elektrotech., 28, 113-38 (No. 3, 1952)  
In Polish.

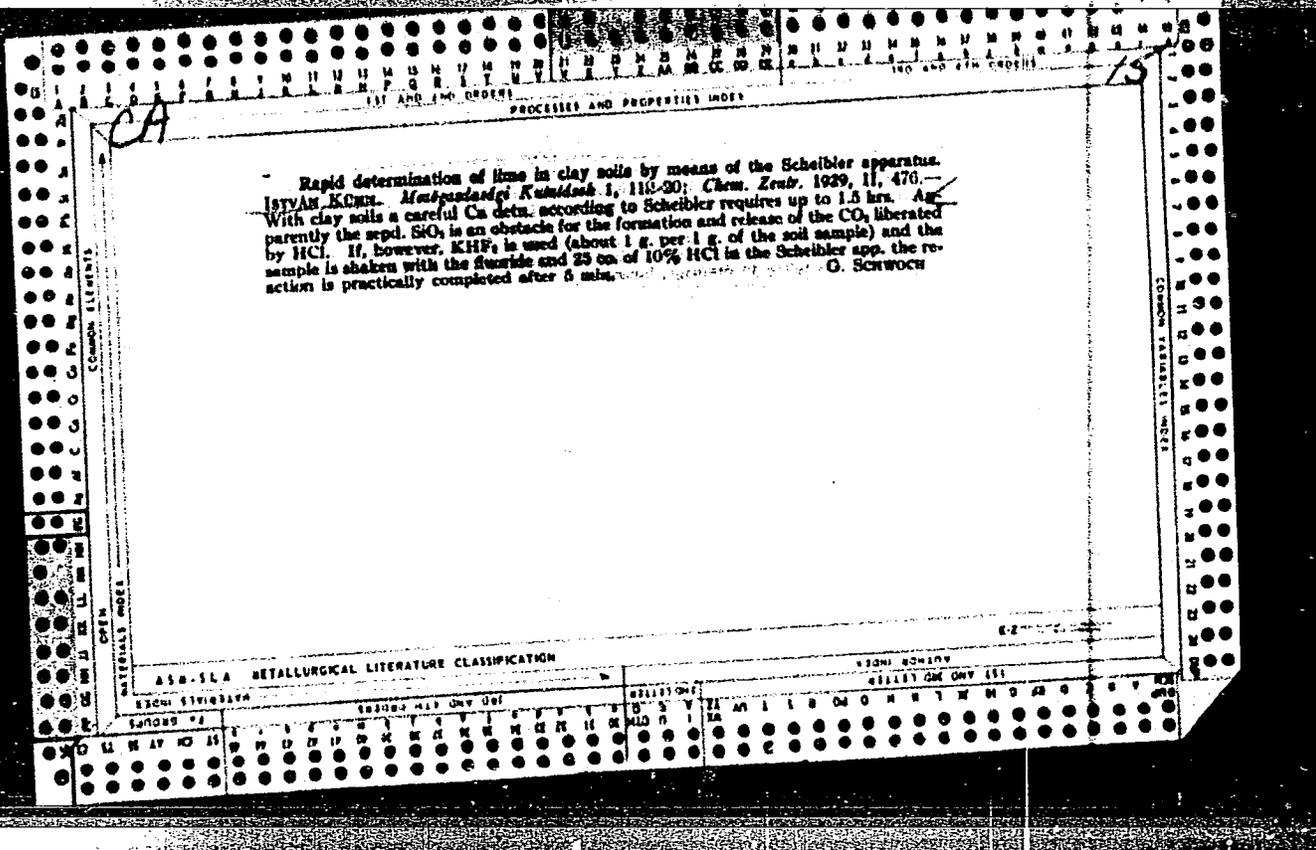
Principles of operation and details of the design of long-distance telemetering equipment of all stages are discussed for time, number and for frequency systems of impulses, also for low, medium and high frequency systems. Theories of summation measurement of various electrical quantities are reviewed. Systems of intermittent transmission of measurements by cycles and by remote selection are outlined. Principles of telemetering on 60-200 kV power lines are reviewed with special stress on circuit components.

J. LUKASZEWICZ

KUHN, h

Effect of failures on long-distance lines of high-frequency telecommunication, Tr. from the German, p. 108. (Strojnoelektrotechnicky Casopis. Bratislava, Vol. 5, No. 2, 1954)

SO: Monthly list of East European Accessions, (EEAL), LC Vol 4, No. 6, June 1955, Uncl



PROCESS AND PROPERTIES INDEX

1ST AND 2ND GROUPS

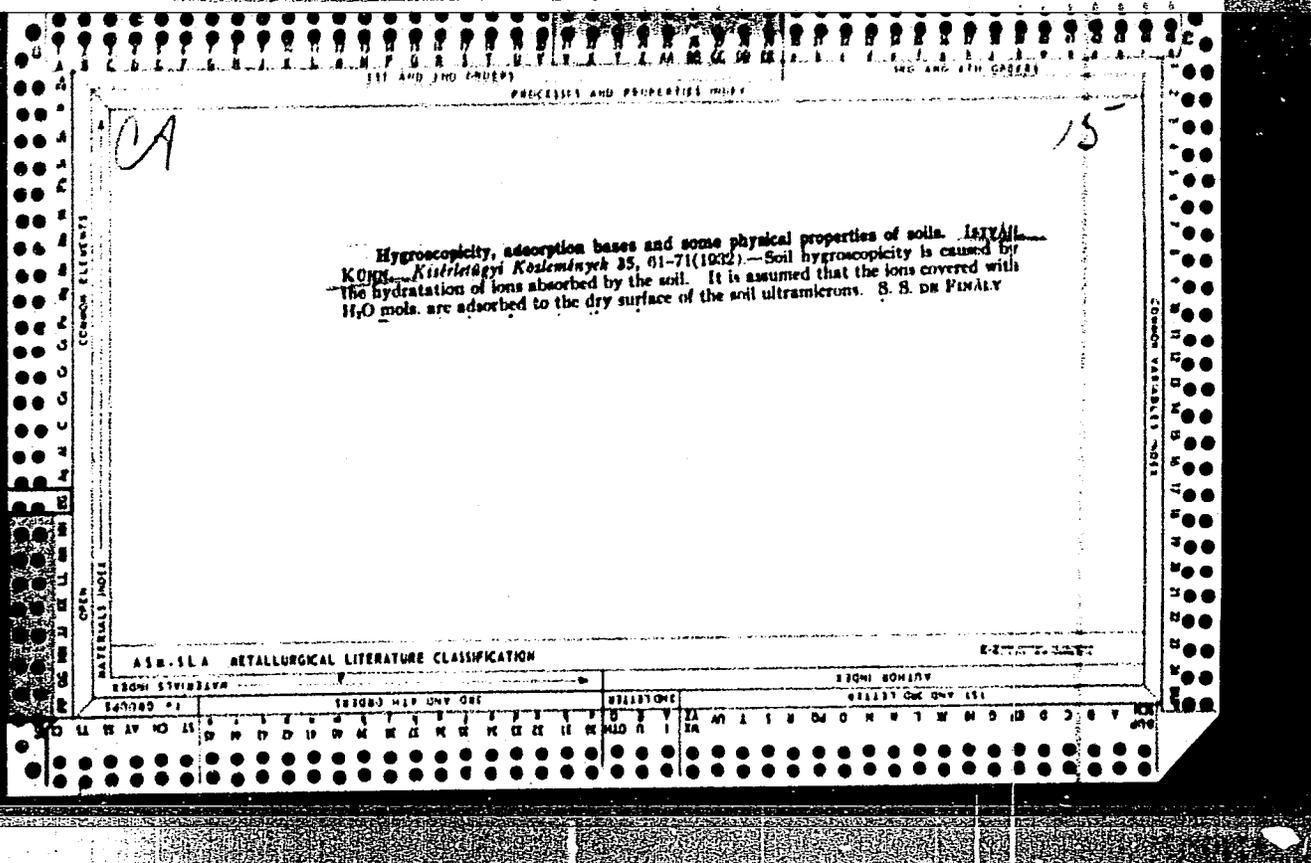
4

CA

The electrochemical behavior of thallium in sodium hydroxide solution. J. KCHN. *Bull. soc. chim. Romania* 18, 40-8 (1932).—Anode current density-e. m. f. curves are given for Tl in 2N NaOH at 18°, and in 11.25 N NaOH at 90°. There were sudden increases of current at -0.41, +0.03 and +1.08 v. in 11.25 N NaOH; at -0.32, +0.38 and +1.35 v. in 2 N NaOH. With a Pt anode and pure TlOH, Tl<sub>2</sub>O<sub>3</sub> was pptd., the ppt. contg. 4-6% of H<sub>2</sub>O and about 1% of H<sub>2</sub>. The normal potential of Tl in TlOH is -0.320 v.

GERALD M. PETTY

METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

BC

A-1

Reduction of zinc oxide with natural gas. C. CANDRA and I. KOGNY (Bul. Soc. Chim. Romania, 1934, 10, 121-130).—Reduction with natural gas containing 88.7% CH<sub>4</sub> begins at 700° and is complete at 900°. The degree of reduction (r) at 900° with a continuous stream of CH<sub>4</sub> passes through two max. as the streaming velocity (v) increases from 0 to 28 litres per hr. With low v CH<sub>4</sub> dissociates and the main reaction is ZnO + C (from CH<sub>4</sub>) = Zn + CO. With higher v the dissociation is less and the main reaction is ZnO + CH<sub>4</sub> = Zn + CO + 2H<sub>2</sub>. As v increases past the second max. v remains const., since the first reaction is eliminated. The gaseous products are CO and H<sub>2</sub>, 1:5, the % CO<sub>2</sub> and H<sub>2</sub>O being very small; no reoxidation of Zn by H<sub>2</sub>O occurs. R. S. B.

AS 6-314 METALLURGICAL LITERATURE CLASSIFICATION

6-27-57

FROM CLASSIFICATION

FROM NOMINALLY

LABORATORY

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REVISIONS

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11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

1ST AND 2ND ORDERS      3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

CA

11D

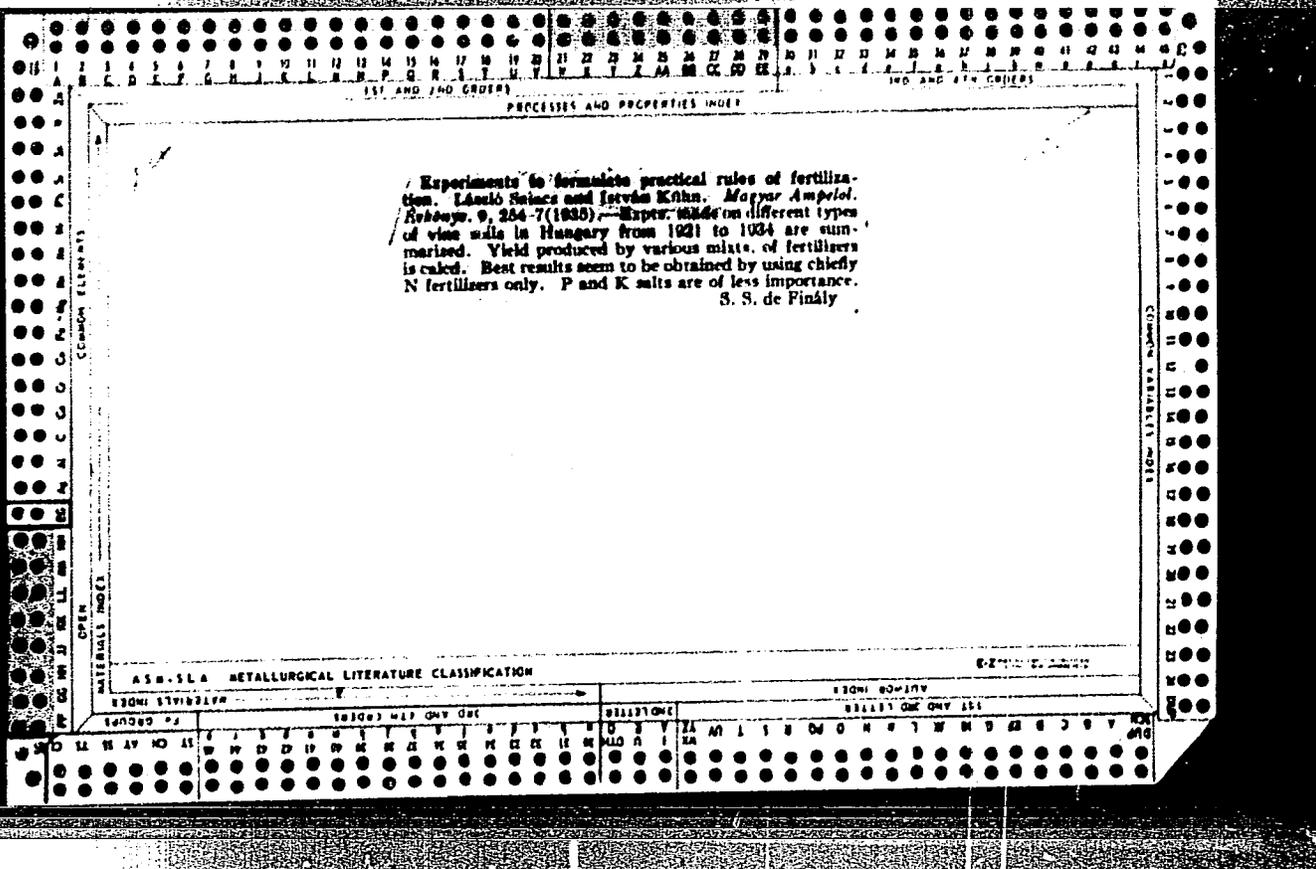
Acidity of vine leaf and *Peronospora*. István Kuhn. *Magyar Ártel. Folyv.* 9, 47-57 (1935). --Calorimetric detn. of  $pH$  values of vine leaves showed that direct sunshine increases the  $pH$  values of leaves by 0.3 (av.). No connection between chlorophyll and  $pH$  values of leaves could be detd. The occurrence of *Erysiphe vitis* seemed to have an acidifying influence. Some systematic distribution of  $pH$  values of leaves of the same branch could be detected.  $pH$  values over 4.1 may give some protection against *Peronospora*. The immunity of some vine types against *Peronospora* is without doubt caused by some other factor than  $pH$  value. S. S. de Finály

ASB. S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS

COMMON VALENCE INDEX

1ST AND 2ND ORDERS      3RD AND 4TH ORDERS



1ST AND 2ND GROUPS

PROCESSES AND PROPERTIES INDEX

Reduction of zinc oxide with natural gas. C. Candea and I. Kühn. *Bul. soc. chim. Romania* 10, 121 (1935).—With Surinzel natural gas contg. 98.7% CH<sub>4</sub>, the reduction of ZnO was investigated, each of the 3 factors time, temp. and gas velocity being varied as the others were held const. When 1 l. of gas is recirculated for 2 hrs. at a velocity of 3 l./hr. in a 20 mm. quartz tube there is a slight reduction at 770° while at 900° the reduction is complete. At 900° and 850° in a closed system in which the gas is recirculated it takes less time to obtain a given amt. of reduction at the higher temp., the difference being less as the time is extended. When the raw gas is passed over the ZnO in velocities varying from 1 to 25 l./hr. for const. times of 30 min. 2 peaks of max. reduction occur, 1 at 6 l./hr. and 1 at 10.5 l./hr. The reduction at the first and second max. is thought to occur in the following way, ZnO + C → Zn + CO and ZnO + CH<sub>4</sub> → Zn + CO + 2H<sub>2</sub>, resp. The gas after reaction contained mainly CO and H<sub>2</sub> in the ratio 1.5. Complete tables of data are given. Howard Agnew South

ASB-SL-8 METALLURGICAL LITERATURE CLASSIFICATION

REGIONAL INDEX

WORD INDEX

ALPHABETIC INDEX

NUMERICAL INDEX

SYMBOLIC INDEX

RELATIVE INDEX

PROCESSES AND PROPERTIES INDEX

1ST AND 2ND ORDERS

15

*CA*

The determination of the easily assimilable potassium and phosphoric acid in soils. *István Kühn, Kisérletügyi Közlemények 28, 189-204(1935)*.--If in Neubauer expts. less than 100 g. soil is used, the amount of nutrients assimilated by the roots calcd. to 100 g. soil steadily increases. Roots can assimilate K from a distance of 8-10 mm. and P<sub>2</sub>O<sub>5</sub> from 5 to 6 mm. Available K seems to be the same as exchangeable K. Available P<sub>2</sub>O<sub>5</sub> can be detd. by an exchange procedure: Sieve 5.55 g. soil in 2-mm sieves, shake with 1000 cc. 10% (NH<sub>4</sub>)<sub>2</sub>CO<sub>3</sub> soln., treat the filtrate several times according to detailed directions with a mixt. of HNO<sub>3</sub> (d. 1.1) and H<sub>2</sub>O<sub>2</sub>, and ppt. P<sub>2</sub>O<sub>5</sub> in presence of NH<sub>4</sub>NO<sub>3</sub> and HNO<sub>3</sub>. Each mg. of ppt. is equal to 0.685 mg. exchangeable P<sub>2</sub>O<sub>5</sub>. The values obtained are about 4 times those obtained by the Neubauer method. The method is applicable also to crude phosphates and various fertilizers and gives always more real values for available P<sub>2</sub>O<sub>5</sub> contents than does the usual citric acid extrn. . . . . S. S. de Finály

METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

KUHN, I.

"Economic law of absolute harmony between production relations and the character of production forces." (p.716). PŘIRODA A SPOLOČNOST. (Spoločnosť pre sierenie politických a vedeckých poznatkov na Slovensku) Martin. Vol. 2, No. 12, 1953.

SO: East European Accessions List, Vol 3, No. 8, Aug 1954.

KUHN, I.: OLAH, GY. PAVLATH, A.:

Production of fluorine organic compounds. IX. Monmolecular reduction of nitrofluorine benzene. X. Bimolecular reduct on of nitrofluorine. p. 489. KOZLEMENYEI. Budapest. Vol. 5, no. 4, 1955.

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, No. 2, Feb. 1956

KUHN, F.

HUNGARY/Organic Chemistry. Synthetic Organic Chemistry.

E-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19282.

Author : Olah Gy., Pavlath A., Kuhn I., Herr F.

Inst :

Title : Synthesis of Organic Fluorine Compounds. XVI. Preparation of Fluorine Derivatives of Pyribenzamine.

Orig Pub: Magyar Tud. Acad. Kem. Tud. Oszt. Kozl., 1955, 6, No 3-4, 327-330.

Abstract: Three methods of synthesis of fluorine derivatives of pyribenzamine (N,N-dimethyl-N'-benzyl-N'-( $\alpha$ -pyridyl)-ethylene-diamine) are developed. o- and m-fluoropyribenzamines (I and II) were obtained and their antihistamine activity was compared. In a guinea-pig, 1  $\gamma$  of histamine neutralizes the action of 0.05-0.1  $\gamma$  n-fluoropyribenzamine (III), 1  $\gamma$  II and 10  $\gamma$  I. I, II, III are less toxic, than other haloid substituted pyribenzamines. 0.1 mole N,N-dime-

Card : 1/3

HUNGARY/Organic Chemistry. Synthetic Organic Chemistry.

E-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19282

liquor the reaction mass is extracted two times more, yielding VII 83%, m.p. 95°. To a suspension 0.05 mole NaOH in 40 cc toluene is added in drops 0.05 mole VII, boiled with stirring for 3 hours, then at 50° is added a solution 5.4 g.  $(\text{CH}_3)_2\text{NCH}_2\text{CH}_2\text{Cl}$  (VIII) in 10 cc toluene, boiled 6 hours, from the cooled off filtrate is obtained III, yield 58.8%. 0.1 mole hydrochloride VIII is boiled 2 hours with 0.2 mole VI in 200 cc toluene, shaken with 60 cc 6N NaOH, is obtained N,N-dimethyl-N'-(n-fluorobenzyl)-ethylenediamine (IX), b.p. 132-134°/12 mm, yield 32%. 0.1 mole IX boiled with 0.05 mole IV in 25 cc toluene 5 hours is shaken with 30 cc 6N NaOH is obtained III, yield 61.5%. Part XV see RZhKhim, 1956, 39629.

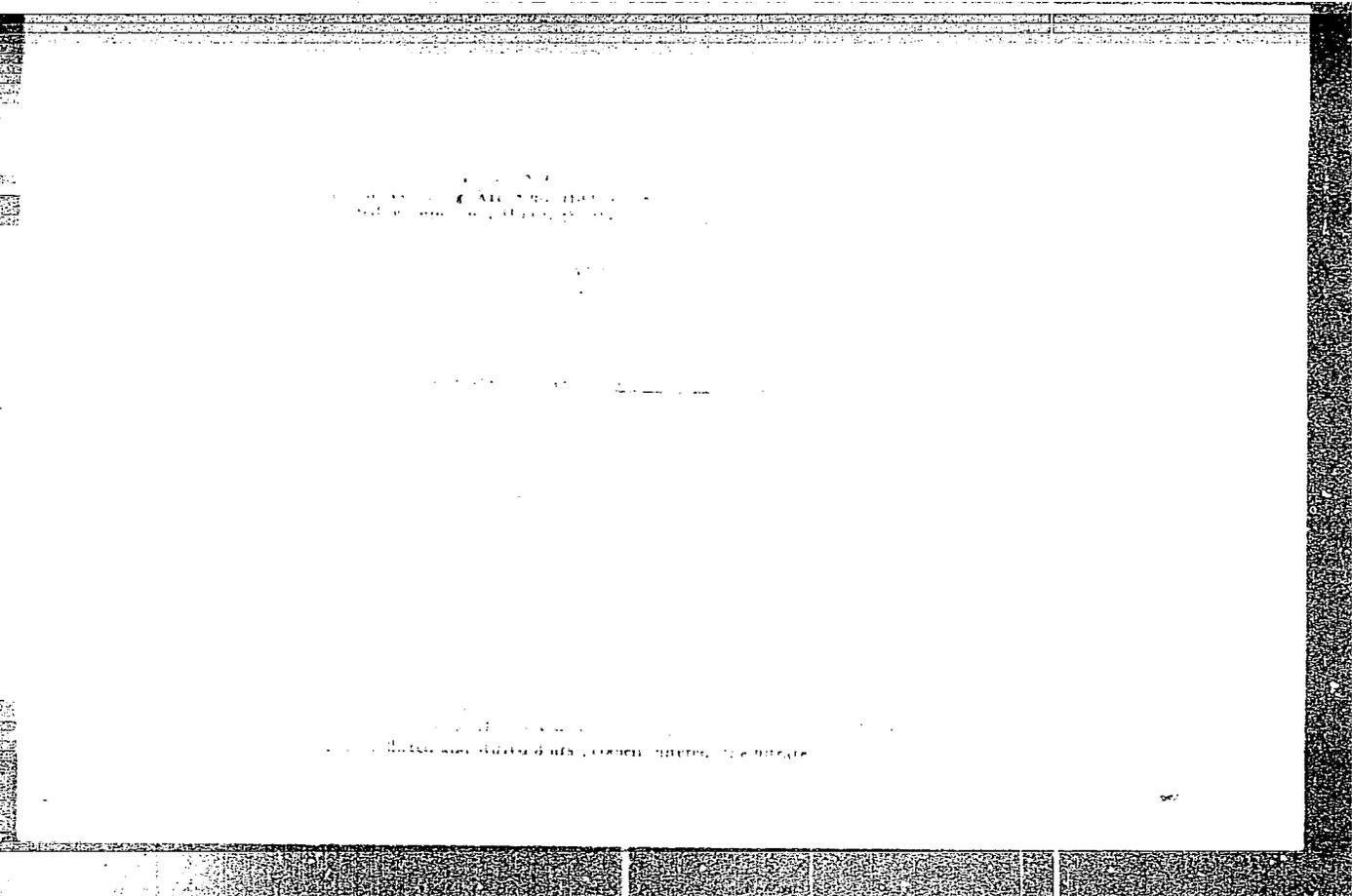
Card : 3/3

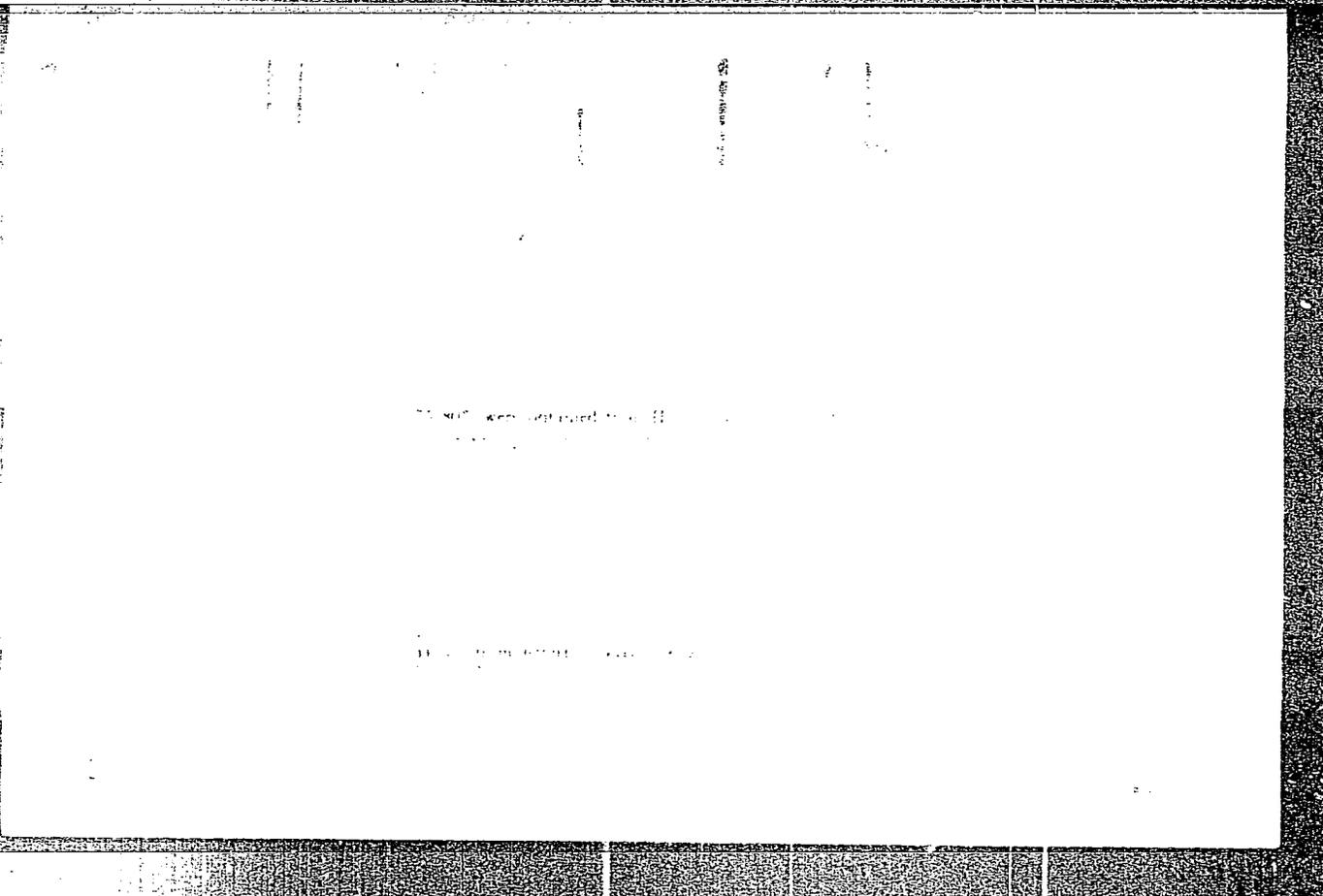
0.5 g.  $FeCl_3$  in 100 g. ice, allowed to stand, and the white ppt. recrystd. from alc. and steam distd. in a Pezzi-leser (t app. gave white cryst.  $FeCl_2NO$ , m.  $39^\circ, 51^\circ, 18^\circ$ . The  $FeCl_2NO$ , (II) (b.  $87-9^\circ$ , b.  $183^\circ$ , b.  $77-8^\circ$ , b.  $184^\circ$ ; b.  $87-9^\circ$ , b.  $182-3^\circ$ ) were prepd. by the Schlemmer-Piljarsky method (S. *et al.*, *Chem. Ztg.*, 1877, 11, HCl salts (14.5 g.) in 15 ml. concd.  $H_2SO_4$  and 15 ml.  $H_2O$  diluted with 6.0 g.  $NaNO_2$  in 20 ml.  $H_2O$  dil. with 100 ml.  $H_2O$  salt. with  $SO_2$ , allowed to stand 1 hr., evapd. on a  $100^\circ$  bath, the residual sirup reduced with 150 ml.  $H_2O$ , filtered and dried.

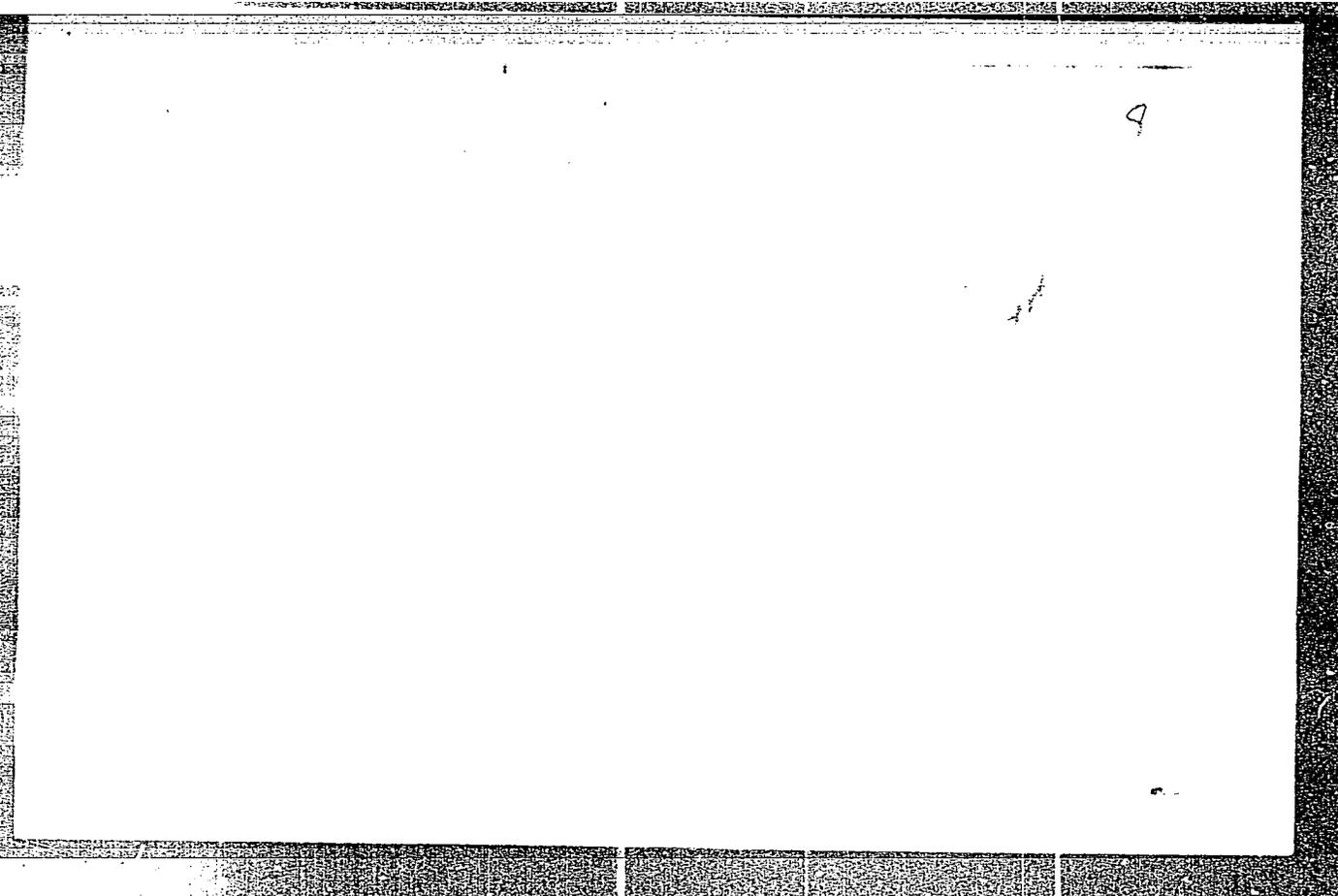
The free bases were liberated from the above salt, the soln. treated with  $H_2O$ , dried with  $K_2CO_3$  and distd. in  $vacuo$  to give the base,  $FeCl_2NO$ , m.  $39^\circ, 51^\circ, 18^\circ$ ;  $FeCl_2NO$ , (II) (b.  $87-9^\circ$ , b.  $183^\circ$ , b.  $77-8^\circ$ , b.  $184^\circ$ ; b.  $87-9^\circ$ , b.  $182-3^\circ$ ) were prepd. by the Schlemmer-Piljarsky method (S. *et al.*, *Chem. Ztg.*, 1877, 11, HCl salts (14.5 g.) in 15 ml. concd.  $H_2SO_4$  and 15 ml.  $H_2O$  diluted with 6.0 g.  $NaNO_2$  in 20 ml.  $H_2O$  dil. with 100 ml.  $H_2O$  salt. with  $SO_2$ , allowed to stand 1 hr., evapd. on a  $100^\circ$  bath, the residual sirup reduced with 150 ml.  $H_2O$ , filtered and dried.

... stirred 1 hr. on the H<sub>2</sub>O bath at 50°C. cooled, ...  
... 50% AcOH and allowed to stand 15 min. gave

rearrangement of the dihydro-1,2,4-triazine was effected







KUHN, I.

Distr: 4E2c(j)

7

Synthesis of organic fluorine compounds. XII. Nitration of fluorobenzene. György Oláh, Attila Pavláth, I. Kuhn, and Gy. Varsányi (Central Research Inst. Chem. Hungarian Acad. Sci., Budapest). *Acta Chim. Acad. Sci. Hung.* 7, 431-42 (1955) (in English); cf. *C.A.* 50, 11201b; 52, 6283f. — PhF was nitrated by the following methods and the proportion of  $FC_6H_4NO_2$  isomers formed detd. from the ultraviolet absorption spectra (reagents, % yield, temp. of reaction, and % *p*-, *o*-, and *m*-isomers given): 35 g.  $HNO_3$  (sp. gr. 1.41) and 128 g. concd.  $H_2SO_4$ , 84.5,  $-10^\circ$ , 90, 8, —; 40 g.  $H_2SO_4 \cdot H_2O$ , 25 g. 80%  $H_2SO_4$ , and 30 g.  $NaNO_3$ , 65, 60-70°, 90, 8, —;  $AcONO_2$ , 71.2, 0°, 90, 4, —;  $BzONO_2$ , 60.2, cooled, 100, —;  $CCl_4 + N_2O_5$ , 93.8, cooled, 72, 28, —; liquid  $N_2O_5$ , — (5.5 g. from 25 g. PhF), room temp., 78, 16, 6;  $N_2O_5$  vapor, — (4 g. from 90 g. PhF), 130°, —, 90, 10. Ionic reactions give largely *p*-isomers/mixed type give 72-8% *p*- and 18-28% *o*-isomers, and the presumably radical type mechanism 90% *o*- and 10% *m*-isomers. 1,2,4- $FC_6H_3(NO_2)_3$  (I), bp 153-6°, was prepd. in 40% yield from 57 g. PhF with 70 g.  $H_2SO_4 \cdot H_2O$  and 75 g. fuming  $HNO_3$  at  $-5$  to  $0^\circ$  in 24.8% yield from 101 g. 2,4- $Cl_2C_6H_3(NO_2)_2$  in 101 g.  $PhNO_2$  heated 2 hrs. at  $105-10^\circ$  in ultraviolet light with 20 g. dry KF, and the process repeated 3 times, and in 79.8% yield, m.  $24^\circ$ , from 4 g. PhF cooled and stirred with 9.5 g.  $N_2O_5$  added in small portions. I (1 g.) added to 4 g. 60% oleum at  $0^\circ$  with 3 g.  $H_2SO_4 \cdot H_2O$  and 3 g. fuming  $HNO_3$ , the mixt. heated to  $90^\circ$  2 hrs. and to  $130^\circ$  10 hrs., cooled, and poured onto ice yielded 36% *sym-FC\_6H\_3(NO\_2)\_3* (II), m.  $35^\circ$ . Further nitration of 5 g. I with 5 g.  $N_2O_5$  added with cooling, the mixt. warmed slowly, heated 1 hr. on a boiling  $H_2O$  bath, cooled, poured on ice, and the ppt. dried *in vacuo* yielded a mixt. contg. 54% II. II is explosive. Curves of the absorption spectra of *o*-, *m*-, and *p*- $FC_6H_4NO_2$  between 2700-3000 Å. are given and the method of quant. analysis by absorption spectra (Varsányi, *C.A.* 50, 7686i) simplified for mixts. of products of identical mol. wt. XIII. Derivatives of 2-fluoroethylurethan. György Oláh, Attila Pavláth, and László H. Nesztkó. *Ibid.* 443-9; cf. *C.A.* 49, 6094j; 52, 3691f. — The following 2-fluoroethylurethans,  $RNHC(O)(CH_2)_2F$ , were prepd. by adding 0.1 mole  $ClCO(CH_2)_2F$  (I) to 0.2 mole  $RNH_2$  cooled in 50 ml.  $Et_2O$ , allowing the mixt. to stand overnight, filtering if necessary, drying the filtrate, and evapg. the  $Et_2O$  (R, crystg. solvent, m.p., and % yield given):  $PhNH_2$ , 54-5°, 83.7; *o*- $MeC_6H_4$ , —, 74-5°, 70.1; *m*- $MeC_6H_4$ , —, bp 171-4°, 68.6; *p*- $MeC_6H_4$ , —, 59-60°, 82.7; *p*- $FC_6H_4$ , hexane, 75°, 80.8; *p*- $FC_6H_4Cl$ , ligroine, 58-9°, 83.3; *p*- $ClC_6H_4$ , hexane, 64°, 69.3; *p*- $BrC_6H_4$ , hexane, 94°, 94.6; *p*- $IC_6H_4$ , hexane, 111-12° (yellow crystals), 82.3; *o*- $NC_6H_4$ , 30%  $EtOH$ , 62° (yellow crystals), 86.7; *m*- $NC_6H_4$ , 30%  $EtOH$ , 51-2°, 81.1; *p*- $O_2NC_6H_4$ , 30%  $EtOH$ , 124-5° (yellow), 88.7; *N*-phenyl-*N*-methyl, —, (b) 125-7°, 92.4; *N*-phenyl-*N*-ethyl, —, (b) 118-20°, 86.3;  $\alpha$ -pyridyl,  $EtOH$ , 123.5°, 81.4;  $\beta$ -pyridyl,  $EtOH$ , 100°, 75.9;  $\gamma$ -pyridyl,  $EtOH$ , 139°, 80.2; *N,N*-bis(2-chloroethyl), —, (b) 130-40°, 87.8; *N*-(1-hydroxy-2,2,2-trichloroethyl) (II),  $Me_2CO$ , 92°, 83.3; *N*-(2,2,2-trichloroethylidene), —, 121°, 85.1. Similarly prepd. were: *N,N'*-ethylene-2-fluoroethylurethan,  $H_2O$ , 115°, 94.2; *N,N'*-(2,2,2-trichloroethylidene)-2-fluoroethylurethan,  $Me_2CO$ , 159°, 65.3;

Synthesis of organic...

2-fluoroethylurethan N-(2-fluoroethyl)carboxylate, Me<sub>2</sub>CO, 08-9°, 56.4. With esterase blocking agents (e.g. diisopropyl fluorophosphate), toxic doses of these compds. administered to animals produced no toxic symptoms. The compds. are being tested as growth inhibitors for exptl. cancerous tumors. XV. Decomposition reactions of derivatives of fluorosuccinic acid. György Oláh, Attila Pavláth, and Gyula B. Major. *Ibid.* 461-3.—Fluoroacetates (I) with NH<sub>4</sub>OH give the fluoroacetamide whose 15% H<sub>2</sub>O soln. is stable. This soln. treated with chloride of lime (Hofmann reaction) decomp. completely. 2-Fluoroethanol (II) is also completely decompd. on alk. oxidation with chloride of lime. Biol. effects of I and II are similar. XVII. Preparation of 2-fluoroethylamine. György Oláh and Attila Pavláth. *Ibid.* 461-3.—See *C.A.* 50, 10642a.

Janet E. Austin

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Jan E.

Kuhn, I

✓20. Synthesis of organic fluorine compounds. IX. Mono-  
 molecular reduction of nitro fluorobenzenes. X. Dimole-  
 cular reduction of nitro fluorobenzenes. XI. Dimole-  
 cular reduction of several aromatic fluorine derivatives. (In  
 English) Gy. OIAB, A. PAVIATH, I. KUHN. *Acta  
 Chimica Academiae Scientiarum Hungaricae*, Vol. 7,  
 1953, No. 1-2, pp. 65-92, 3 tabs.

Chem

3

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M.A. YOUTZ

3 copies

The corresponding fluorophenyl hydroxylamines  
 were obtained by reducing the *ortho*, *meta* or *para*-nitro  
 fluorobenzenes with zinc and ammonium chloride. By  
 ferric chloride oxidation the fluorophenyl hydroxyl-  
 amines were transformed into the three corresponding  
 fluoro-nitrosobenzene isomers. Fluoroanilines were pre-  
 pared by Schlemann's method (reduction by means of  
 stannous chloride) and the fluorophenylhydrazines were  
 obtained from the corresponding diazotized fluoro-  
 anilines by way of sulphur dioxide reduction. Investigat-  
 ing the bimolecular reduction of nitro fluorobenzenes in  
 alkaline media it was found that only the *meta* derivative  
 could be reduced with satisfactory yields. The difluoro  
 azoxybenzenes or difluoro azobenzenes were obtained  
 in extremely good yields by lithium aluminium hydride  
 reduction depending on the quantity of reducing agent  
 employed. Attempts to prepare the difluoro hydrazo-  
 benzenes by this method were unsuccessful. The in-  
 vestigations on aromatic fluorine derivatives included  
 the chloromethylation of fluorobenzene, the elaboration  
 of a simple method for the preparation of *p*-fluoro-  
 benzole acid from *p*-fluorotoluene and the preparation  
 of *p*-fluorobenzaldehyde and *p*-fluoroaniline by the  
 Coleman-Pyle reaction.

DM ✓

KUHN, I.

Production and analysis of fluorine organic compounds. XXI. Production of fluoroacetaldehyde and fluoromethyl ketones. p. 481.

MAGYAR TUDOMANYOS AKADEMIA Vol. 7, no. 3/4 1955  
Budapest Hungary

SOURCE: EAST EUROPEAN ACCESSIONS LIST Bol. 5, no. 7, July 1956

KUHN, I.

KUHN, I. Synthesis and investigation of fluorine organic compounds. XVI.  
preparation of fluorinated pyribenzamines. In English. p. 157

Vol. 8, no. 1/3, 1955  
ACTA CHIMICA  
SCIENCE  
Budapest, Hungary

So: East European Accessions, Vol. 5, no. 5, May 1956

Kuhn, L

Various substances  
in the following table  
are listed as being  
available in the  
United States

2.  $\text{SbCl}_5$  in lieu of  $\text{BF}_3 \cdot \text{OEt}_2$  (NO,  $\text{SbCl}_5$  (III) is obtained.  $\text{NO}_2$ ,  $\text{SbP}_5$  (III) and  $\text{NO}_2\text{PP}_5$  (IV) are present, depending on the amount of  $\text{SbCl}_5$  and  $\text{P}_2\text{O}_5$  (C 4, 45, 2009). (IV) is obtained in the following manner: The material is neutralized and dried product distilled (method A) and activated compounds such as  $\text{P}_2\text{O}_5$  at 2-130° (method B) and for a final or last by a mixture of systems in 10%  $\text{H}_2\text{O}$  (method C) and  $\text{P}_2\text{O}_5$  (method D) have been treated (7% yield of monochloro compd. and method given). With 1.  $\text{C}_2\text{H}_5$ , 87% (1944) and 1.  $\text{NO}_2$ , 85% (1944) (1944).

KUHN, I.

HUNGARY/Organic Chemistry. Synthetic Organic Chemistry.

G-2

Abs Jour: Ref. Zhur.-Khimiya, No II, 1958-36285.

Author : Pavlath A., Olah G., (XVIII); Olah G., Kuhn I.,  
(XIX); Olah G., Kuhn I., Beke I. (XX)

Inst : Not given.

Title : Synthesis and Investigation of Fluororganic Compounds.  
XVII. Synthesis of Certain New Di- and Tri-Halogen  
substituted Fluorobenzenes by the Balts-Shiman Reaction.  
XIX Formates. XX Synthesis of Fluoric anhydrides.

Orig Pub: Magyar tud. Akad. Kem. tud. oszt. kozl., 1956, 7, No 2,  
213-217, 219-223, 233-239.

Abstract: No abstract. Refer to Ref. Zhur.-Khimiya, 1957, 37706,  
37707, 63581.

Card : 1/1

KUHN, I.

HUNGARY/Organic Chemistry. Synthetic Organic Chemistry.

G-2

Abs Jour: Ref. Zhur.-Khimiya, No II, 1958, 36288.

Author : Olah G., Kuhn I.

Inst : Not given.

Title : Synthesis and Investigation of Fluorganic Substances.  
XXI. Synthesis of Acetaldehydefluoride and of Aliphatic  
Fluoromethylketones.

Orig Pub: Magyar tud. akad. Kem. oszt. lozl., 1956, 7, No 3-4,  
481-483.

Abstract: No abstract. Refer to Ref. Zhur.-Khimiya, 1957, 63581.

Card : 1/1

18

KUHN, I

14. Synthesis and investigation of organic  
compounds XIX / Formylation by formic acid

211 - 209

reaction with

reaction of the complex with  
alkyl formates were obtained  
treatment of alkyl formates  
resulted in the formation of the

FM

Kohn Istvan

✓ Synthesis and investigation of organic fluorine compounds XXV. The preparation of alkyl fluorocarbonates and remarks relative to a new published preparation of alkyl fluorides. György Oláh and István Kohn, *Magyar Kémiai Sci. Budapest*

... through pyrolysis ...  
through  $\text{BF}_3$  5 g ...  
action vacuum. There is ...  
temp. The gases were ...  
transformed to  $\text{COF}_2$  ...  
...  $\text{COF}_2$  ...

fractionally distd. to yield 85% ...  
is added slowly to 0.25 mole ...  
and stirring. The mixt. was ...  
temp., held several min. at ...  
 $\text{K}_2\text{CO}_3$  and  $\text{CaCl}_2$ , filtered, and fractionated to yield  $\text{FCO}_2\text{R}$   
(II) ... b.p., and % yields given): Me, 40°, 72; Et, 57°  
84; Pr, 60-102°, 81; iso-Pr, 81-2°, 75; Bu, 97-9°, 85; n-  
Bu, 92-3°, 75;  $\text{C}_6\text{H}_5$ , 142-4°, 79.  $\text{COFCl}$ , except from  
 $\text{COCl}_2$  and  $\text{SO}_2$ , with ROH at -50° gave II in 20% yield.  
This synthesis affords a ready means of prep. II to  
the reaction  $\text{FCO}_2\text{R} \rightarrow \text{FR} - \text{CO} - \text{Cl}$  (Nakamura, *et al.*,  
C.A. 50, 4045d, 8477d) Glen E. Journey

Isolation of a boron-oxide intermediate complex of the electrophilic aromatic substitution reaction and its application as a substitution agent. G. (Hh) and I. Kuhn (Hung Acad Sci, Budapest). *Naturwissenschaften* 43: 435 (1956)

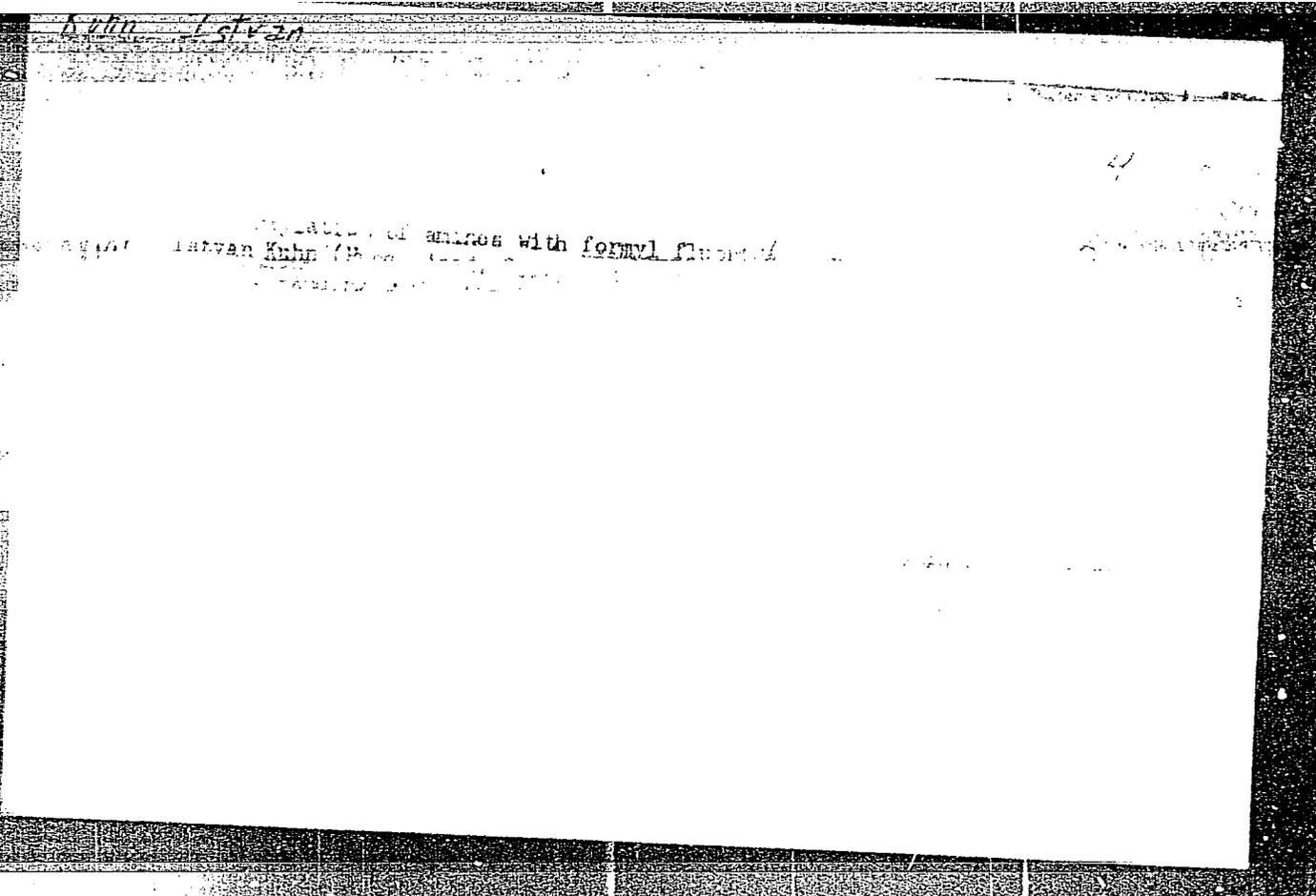
The alkylboronoxide could be prepared through the reaction of alkyl or allyl boronates with  $BF_3$ . The isolated complex was used to alkylate  $PhMe$ , etc.  $O_2NF$  and  $BF_3$  gave nitronium borofluoride, a powerful nitrating reagent, which was used to nitrate  $PhMe$ ,  $PhF$ ,  $PhCl$ ,  $PhCO_2$ ,  $1,2,6-F_3C_6H_3$ , and  $2,4-(O_2N)_2C_6H_3$ . Sulfonium borofluoride was used to sulfonate aromatic compounds.

Felix Saunders  
MT





Oláh, György; Kuhn, István  
 Meocit, clo (iva, m. 241.47) ...  
 aldehyd ... III (5 g) ...  
 b. 22° ... Similarly, III and I ...  
 51° and III and PrOH give II ...  
 log II (R = Me) (V) then ...  
 C<sub>11</sub>H<sub>15</sub>Cl, warming the mixt. ...  
 night, and ... with PrOH ...  
 V and PrOH give ...  
 ... 6.8 g. III ...  
 ... 10 g. ...  
 ... 7.8 g. ... which,  
 with 7.8 g. C<sub>11</sub>H<sub>15</sub>Cl gives 87% PhCOCH<sub>2</sub>Me, b. 245-7°.  
 Similarly, 6.8 g. III, and 10 g. BuCO<sub>2</sub> give II ...  
 which, treated with 7.8 g. C<sub>11</sub>H<sub>15</sub>Cl gives 87% PhCOCH<sub>2</sub>Me, b.  
 247-9°. Treating II (R = C<sub>11</sub>H<sub>13</sub>) with C<sub>11</sub>H<sub>15</sub>Cl gives 87%  
 PhCOCH<sub>2</sub>Cl, b. 245-7°.



KUHN, ISTVAN

Preparation of nitroamines, alkylamines, and alkyl  
amines with nitrosyl and nitryl tetrafluoroborate  
Olař, Ladislav Noszko, Ištvan Kuhn, and Michael Suster  
(Hung. Acad. Sci., Budapest, *Chem. Ber.* 99, 2374 (1954)) -- Adding 11.7 g. ONBP, with stirring and re-cooling

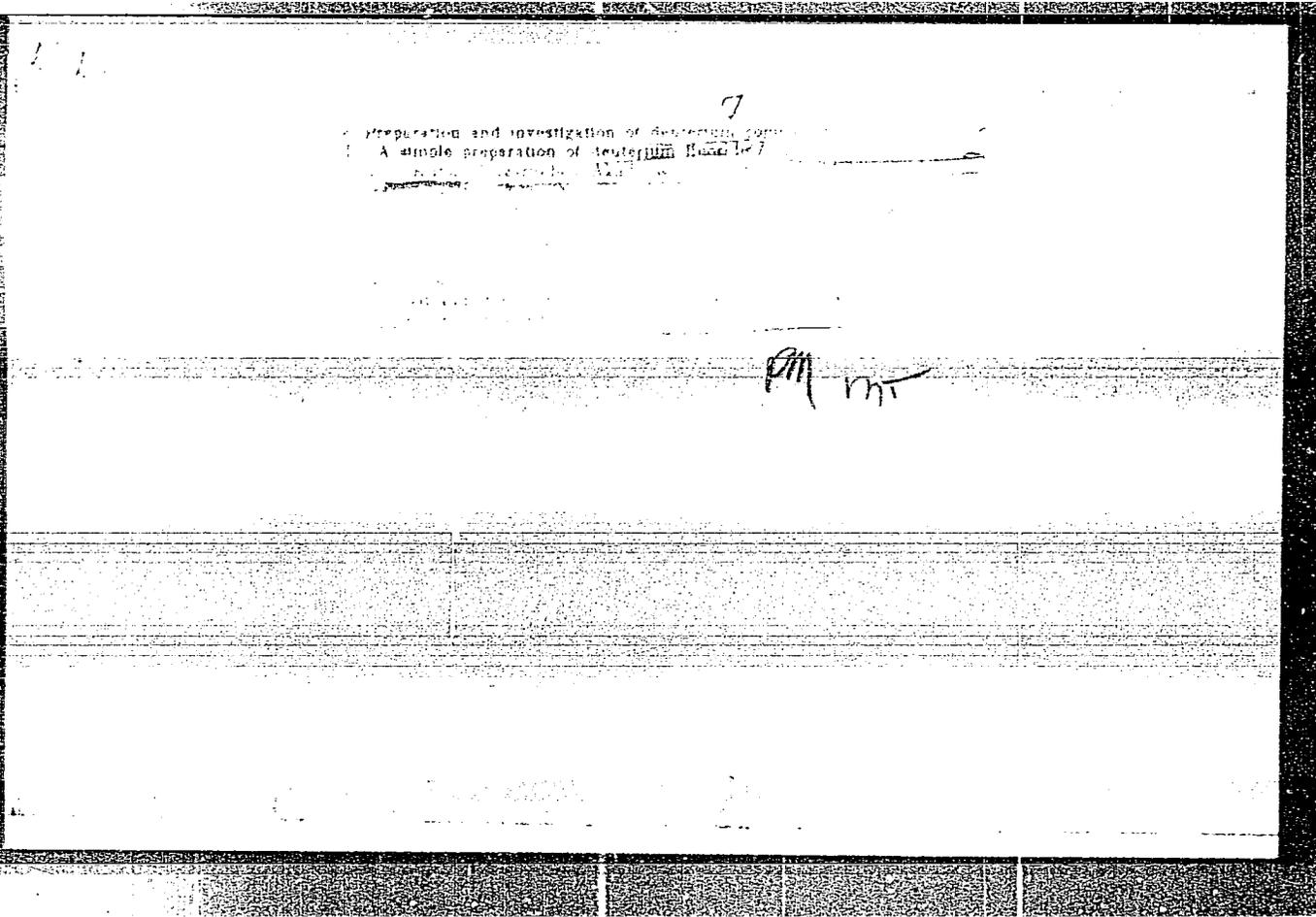
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4EBC  
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SMBM

to 0.3 mole secondary amine, during the next 10 min.  
fractionally distill the filtered and dried mixture. Yield: 100%  
NNO: R, 87, % yield, and b.p. given. (C<sub>10</sub>H<sub>17</sub>N<sub>2</sub>O)  
Et. Ph, 80, b.p. 120°. Me, PhCH<sub>3</sub>, 89, b.p. 150°. C<sub>6</sub>H<sub>5</sub>  
C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>, 78, b.p. 139-40°. C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>CH<sub>2</sub>, 78, b.p. 139-40°.  
Adding 25.5 g. ONBP, in small portions to Me<sub>2</sub>NH, with  
with stirring and re-cooling gives 95% Me<sub>2</sub>NH, b.p. 100-101°  
at 57.5% EtONO, b. 10-20° reprec. Adding 25.5 g.  
ONBP, to 0.5 mole EtOH, heated for 20 min. and cooled  
anhyd. Na<sub>2</sub>CO<sub>3</sub> at -10° gives 20% EtOH, b.p. 35-36°  
42% EtONO, b. 72-87°, or 48% re-ant. reprec. at -10°  
reprec. Adding 13.5 g. ONBP, in small portions, with  
appropriate alc. give the following (C<sub>10</sub>H<sub>17</sub>N<sub>2</sub>O):  
b.p. given): Me, 87, 81-82°. Et, 72, 81-82°. C<sub>6</sub>H<sub>5</sub>, 80,  
10°. Bu, 91, 135-6°. C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>, 85, 135-6°. C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>CH<sub>2</sub>,  
b. 120-8° (n<sub>D</sub><sup>20</sup> 1.3944; C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>, 85, 139-40°. C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>CH<sub>2</sub>,  
104-5°; C<sub>6</sub>F<sub>5</sub>CH<sub>2</sub>, 72, 72-83° (n<sub>D</sub><sup>20</sup> 1.3277)

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Kuhn, I.

✓ Isolation of the stable boron trifluoride-hydrogen fluoride  
complexes of the methylenes, the structure of the  
plus, structure of the Friedel-Crafts complex  
Kuhn and A. B. ...



*DM*

27

Silver tetrafluoroborate as a Lewisian electrophile and  
methyl sulfonate as a Lewisian nucleophile  
strong bond between the silver ion and the  
sulfonate group. The complex is stable  
for the time being. The complex is a  
mediate complex. A further study  
should be made with the complex.

*DM for  
Tracy*

*Kelley*  
Aromatic substitution. III. Alkylation of aromatic compounds by the boron trifluoride etherate complexed reaction of alkyl fluorides. C. 1968. *Journal of Organic Chemistry*, 33, 10, 2300-2304.

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2. Kish

Distr:  $4E2c/4E3c/4E3d/4E2c(j)$

41. A study of the electrophilic deuterization of toluene by deuterium fluoride and boron trifluoride. Gy. OTÁH, A. PAVIÁTH, I. KUBP, Gy. OJAH, L. NÓRZKÓ. *A Magyar Tudományos Akadémia Kémiai Tudományok Osztályának Közleményei*. Vol. 9, 1957, No. 1, pp. 39-42

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In the course of the studies on electrophilic aromatic deuterization the reaction with deuterium fluoride was investigated in the presence of boron trifluoride. A simple, new laboratory procedure has been developed for the preparation of deuterium fluoride through the deuterolysis of organic acid fluorides such as benzoyl fluoride. Nuclear deuterization experiments have been made by substituting toluene. A study of the intermediary complexes of the electrophilic aromatic substitutions revealed that complexes of methylbenzenes with hydrogen fluoride and boron trifluoride consist in fact of protonated methylbenzenes of the onium ionic salt (or  $\sigma$  complex) type.

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...  
...  
...  
...  
...

... treated under cooling with 2000 mg of 0.52 g of the  
stirring continued for 1 hour...

... were thus prepd. (R and R' in RNR'CO<sub>2</sub>CH<sub>2</sub>F  
b p. 1000, in p. method of prep. and 2000 mg)

59. p-AcCl<sub>2</sub>, II, 153 47, 4, 30

2

621.317.39 : 621.376.3

4176. Measurement of mechanical quantities by means of frequency modulation. J. Kuryś, Składowość Obrotu, 14, No. 11, 480-8 (1953) in Czech.

It is shown analytically that frequency modulation may be produced by varying the capacitance of a resonant circuit. The choice of the modulation index, frequency deviation and carrier frequency for an f.m. instrument is determined by the required s/n ratio, permissible phase distortion and the condition of quasi-stationariness in the resonant circuits of the system. Linearity of a cylindrical and a parallel-plate (diaphragm) condenser is analysed, the former proving superior. A diaphragm probe (pick-up) required to work at pressures of 100 kg/cm<sup>2</sup> and frequencies of 1000 c/s is designed; this is based on two nomograms relating to the mechanical properties of a steel diaphragm and the permissible non-linearity. A superheterodyne and a straight f.m. instrument are briefly discussed and compared.

K. S. SIMONOWICZ

Handwritten initials or signature.

3

9.10-48 551.54(09)  
Bartnicki, L. and Kühn, L., Drogi rozwoju klimatologii. [Lines of development of climatology.] *Przegląd Meteorologiczny i Hydrologiczny, Warsaw.* 7(3/4):173-181. 1954.

12  
DLC, DWB—A theoretical discussion of the future lines of development of climatology, a branch of science that has been somewhat neglected in recent years. The discussion is based on the author's interpretation of deliberations that took place at the first session of the Climatological Commission of the International Meteorological Organization, and were published recently in the *Bulletin of the OMM* and are based on speeches and articles by THORNTWHAITE and A. H. GORDON. The paper concludes with a report on the proceedings of the session.  
TA  
K Subject Heading: 1. Progress in climatology.—A.M.P.

EE

July 30, 1959

circuit and a demodulator (detector) with a LC filter.  
The output voltage across the passive tuned circuit is  
proportional to the capacitance of the probe, since it  
provides a coupling between the oscillator and the LC  
tank. The probe is connected to the equipment by  
means of a doubly screened coaxial cable, whose outer  
shield is earthed. A detailed description of the

1. 1.

frequency of circular plates under radial strain. . . . .

NIKOLAI VILSKY SLOVENIA (C) FEBRUARY vol. 5, no. 5, Sept. 1955

Czechoslovakia

no. ENGLISH SPEAKING AMERICANS LIST vol. 5, no. 7 July 1956

KUHN, L.; OLAH, GY.

Synthesis and investigation of fluorine organic compounds.  
XIX. Formylation by formyl fluoride. In English. p. 233.  
ACTA CHEMICA. (Magyar Tudományos Akademia) Budapest. Vol.  
10, no. 1/3, 1956.

SOURCE: East European Accessions List (EEAL) Library of Congress,  
Vol. 5, No. 12, December 1956.

KUHN, L.

An exhibition of scientific apparatus in London, 1959. p. 452.

SLADOPROUDY OBZOR. (Ministerstvo vseobecniho strojirenstvi, Ministerstvo, spoju a Ceskoslovenska vedecko-technicka spolecnost, sekce elektrotechnika) Praha, Czechoslovakia, Vol. 20, No. 7, July 1959.

Monthly List of East European Accessions. (EEAI) LC, Vol. 8, No. 11, November 1959.

Uncl.

KUHN, Ludvik, inz.; ROZTOCIL, Jaroslav, inz.

An exhibition of electric measuring instruments in London in 1960.  
Slaboproudý obzor 21 no.9:549-553 S '60. (EEAI 10:1)

1. Státní výzkumný ústav tepelné techniky, Praha  
(Electric measurements) (London--Exhibitions)

KUHN, Ludvik, inz., C.Sc.

A contribution toward the application of the Hall effect for engineering measurements. Slaboproudý obzor 22 no.6:323-329 Je '61.  
(EEAI 10:9)

1. Státní výzkumný ústav tepelné techniky, Praha.

(Hall effect) (Machinery) (Electric measurements)

KUHN, Ludvik, inz., C.Sc.; ROZTOCIL, Jaroslav, inz.

Transistor stroboscope for measurement of vector vibrations.  
Sdel tech 10 no.6:217-218 Je '62.

KUHN, L.; ROZTOCIL, J.

Accumulator charger for general use. Sdel tech 10 no.8:314 Ag '62.

9.2560

Z/039/62/023/002/001/007  
D286/D305

AUTHOR: Kuhn, Ludvík, Engineer, Candidate of Sciences  
TITLE: Transistor circuits used in measuring techniques.  
PERIODICAL: Slaboproudý obzor, v. 23, n. 2, 1962, 66 - 70

TEXT: The article describes simple solutions of transistorized circuits, used in measuring techniques, obtained by applying matrix calculations. After detailed computations with the aid of equivalent circuits, relations were derived for the practical design of such circuits and theoretical results, confirmed by experimental measurements, were plotted in diagrams. The design, equivalent circuits for matrix calculation, and measured parameters of the following transistorized instruments are described: (1) An amplifier with inductive load, (2) a Miller integrator, and (3) a transistorized Schmitt limiter. There are 10 figures, 1 table, and 7 references: 4 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: A.G. Klein: The Schmitt Trigger Circuit. Electronic

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